

Claims

I claim:

1. A top spindle for use with a single or plurality of rotational inertia members comprised of compact disc media storage disks to form a toy top assembly, said top spindle having a spindle axis, said rotational inertia member comprising a rigid disk having a mounting hub flange of a predetermined thickness and a central opening hole having a predetermined diameter, said compact disc providing means for electronically recording, storing or playing back audio, video, textual, computer code, gaming software or other mediums in digital form.
2. A top spindle according to claim 1, wherein said spindle includes
 - a) a spinning tip forming a lower end extremity of said spindle, said spinning tip having an axis concentric with said spindle axis, and
 - b) a threaded cylinder having a major diameter less than said rotational inertia member central opening hole and joined integrally with an upper end portion of said spindle, said threaded cylinder having an axis concentric with said spindle axis, and
 - c) a gripping stem comprising a shaft of axially varying diameter, said shaft having a maximum diameter less than said rotational inertia member central opening hole and providing means for manual spinning of said toy top assembly, said gripping stem joined integrally to an upper end portion of said spindle and having an axis concentric with said spindle axis.
3. A top spindle according to claim 2, wherein said top spindle includes a locating hub having a maximum diameter greater than said threaded cylinder and a minimum diameter less than said rotational inertia member central opening hole, said locating hub joined integrally with an upper end portion of said top spindle and having an axis concentric with said top

spindle axis, said locating hub projecting into said rotational inertial member central opening hole in said toy top assembly thereby providing means to position said rotational inertia member concentric with said spindle axis in said toy top assembly.

4. A top spindle according to claim 3, wherein said spindle includes a bearing platform joined integrally with an upper end portion of said spindle, said bearing platform extending laterally from and located axially adjacent to said locating hub, said bearing platform providing means to fixedly position said rotational inertia member along said spindle axis in said toy top assembly.
5. A rotational inertia member according to claim 1, wherein said rotational inertia member includes a single or plurality of labels on which printed matter exists, said printed matter selected from the group consisting of images, patterns, pictures, logos, shapes, colors and text, said label fixedly attached to a planar surface of said rotational inertia member.
6. A toy top assembly having a spinning axis and comprising
 - a) a compact disc type media storage disk, said compact disc comprised of a rigid disk having a mounting hub flange of predetermined thickness and a central opening hole having a predetermined diameter, said compact disc providing means for electronically recording, storing or playing back audio, video, textual, computer code, gaming software or other mediums in digital form, said compact disc providing means to form the rotational inertia member in said toy top assembly, and
 - b) a gripping stem having a gripping stem axis concentric with said toy top assembly spinning axis, and

c) a spinning tip having a spinning tip axis concentric with said toy top assembly spinning axis.

7. A rotational inertia member according to claim 6, wherein said rotational inertia member includes a single or plurality of labels on which printed matter exists, said printed matter selected from the group consisting of images, patterns, pictures, logos, shapes, colors and text, said label fixedly attached to a planar surface of said rotational inertia member.

8. A gripping stem according to claim 6, wherein

a) said gripping stem includes an externally threaded shaft having a major diameter less than said rotational inertia member central opening hole, said externally threaded shaft joined integrally with a lower end portion of said gripping stem and having an axis concentric with said gripping stem axis, and

b) a bearing platform extending laterally from said gripping stem axis, said bearing platform joined integrally with a lower end portion of said gripping stem, and

c) a spinning knob comprising grasping features selected from the group consisting of knurled, upset, machined, adhesive, formed, grooved and embedded aggregates, said grasping features providing means to assist manual spinning of said toy top, said spinning knob joined integrally with and forming the upper end extremity of said gripping stem.

9. A gripping stem according to claim 8, wherein said gripping stem includes a locating hub having a maximum diameter greater than said externally threaded shaft and a minimum diameter less than said rotational inertia member central opening hole, said locating hub joined integrally with a lower end portion of said gripping stem and having an axis concentric with said gripping stem axis.

10. A gripping stem according to claim 6, wherein

- a) said gripping stem includes an internally threaded hole having a major diameter less than said rotational inertia member central opening hole, said internally threaded hole having an entry location at the lower end extremity of said gripping stem and having an axis concentric with said gripping stem axis, and
- b) a bearing platform extending laterally from said gripping stem axis, said bearing platform joined integrally with a lower end portion of said gripping stem, and
- c) a spinning knob comprising grasping features selected from the group consisting of knurled, upset, machined, adhesive, grooved and embedded aggregates, said grasping features providing means to assist manual spinning of said toy top, said spinning knob joined integrally with and forming the upper end extremity of said gripping stem.

11. A gripping stem according to claim 10, wherein said gripping stem includes a locating hub having a maximum diameter greater than said internally threaded hole and a minimum diameter less than said rotational inertia member central opening hole, said locating hub joined integrally with a lower end portion of said gripping stem and having an axis concentric with said gripping stem axis.

12. A spinning tip according to claim 6, wherein

- a) said spinning tip comprises an axially tapering shaft of varying diameter terminating in an end tip selected from the group consisting of point, spherical radius and rounded feature, said end tip forming the lower end extremity of said spinning tip, and
- b) a bearing platform extending laterally from said spinning tip axis, said bearing platform having a diameter greater than said rotational inertia member central

- opening hole, said bearing platform joined integrally with an upper end portion of said spinning tip, and
- c) an internally threaded hole of major diameter less than said rotational inertia member central opening hole, said internally threaded hole having an entry location at the upper end extremity of said spinning tip.
13. A spinning tip according to claim 12, wherein said spinning tip includes a locating hub having a maximum diameter greater than said internally threaded hole and a minimum diameter less than said rotational inertia member central opening hole, said locating hub joined integrally with an upper end portion of said spinning tip, said locating hub having an axis concentric with said spinning tip axis.
14. A spinning tip according to claim 6, wherein
- a) said spinning tip comprises an axially tapering shaft of varying diameter terminating in an end tip selected from the group consisting of point, spherical radius and rounded feature, said end tip forming the lower end extremity of said spinning tip, and
 - b) a bearing platform extending laterally from said spinning tip axis, said bearing platform having a diameter greater than said rotational inertia member central opening hole, said bearing platform joined integrally with an upper end portion of said spinning tip, and
 - c) an externally threaded shaft of major diameter less than said rotational inertia member central opening hole and joined integrally with an upper end portion of said spinning tip.

15. A spinning tip according to claim 14, wherein said spinning tip includes a locating hub having a maximum diameter greater than said externally threaded shaft and a minimum diameter less than said rotational inertia member central opening hole, said locating hub joined integrally with an upper end portion of said spinning tip, said locating hub having an axis concentric with said spinning tip axis.
16. A toy top comprising a top spindle having a spindle axis and a gripping stem and a spinning tip and a pair of shoulders associated therewith, said toy top designed especially for use with a single or plurality of rotational inertia members comprised of compact disc type media storage disks, said compact discs providing means for electronically recording, storing or playing back audio, video, textual, computer code, gaming software or other mediums in digital form, said rotational inertia member having a prescribed mounting hub flange thickness and a central opening hole, said rotational inertia member hub flange clamped between said shoulder pair.
17. A rotational inertia member according to claim 16, wherein said rotational inertia member includes a single or plurality of labels on which printed matter exists, said printed matter selected from the group consisting of images, patterns, pictures, logos, shapes, colors and text, said label fixedly attached to a planar surface of said rotational inertia member.
18. A label according to claim 17, wherein said printed matter comprises a curvilinear form, said curvilinear form tracing a path of the shadow projected by said spinning tip onto said label when said toy top is subjected to a light source following a prescribed arcuate path relative to said spindle axis, said curvilinear form providing means to fixedly orient the rotational position or angle of said toy top relative to an inertial earth reference and thereby providing means for said toy top to function as a navigational device.

19. A toy top according to claim 16, wherein said shoulder pair is selected from the group consisting of flange, nut, threaded boss, o-ring and spacer.
20. A toy top according to claim 16, wherein said toy top includes means to align said rotational inertia member central opening hole with said spindle axis, said alignment means selected from the group consisting of hub, washer, flanged boss, and o-ring, said alignment means having a minimum external diameter less than or equal to said rotational inertia member central opening hole.